

## Very Narrow Aisle Forklift

Used Very Narrow Aisle Forklift Ontario Canada - Warehousing needs greatly focus on space-saving techniques and layout to maximize expensive square footage and decrease travel time needed to get goods from the loading docks and from point A to point B. Very narrow aisle solutions allow for more space to be dedicated to the storage of goods because less space is required for aisle access. Warehouse optimization consists of warehouse configurations. Warehouse Optimization There are several significant benefits of implementing very narrow aisle warehouse optimization. Since very narrow forklift trucks have been designed to take up significantly less space, warehouse aisle widths can be reduced to half the width needed by traditional forklifts. Certain models of very narrow aisle forklifts can increase the square foot storage capabilities by delivering greater stacking heights. This means that costs are decreased because less warehouse space is necessary for the same amount of stock than if a standard aisle configuration were used. Most urban locations have expensive square footage; therefore, reducing costs is a benefit to warehouses and their business. When planned carefully and properly, it is possible to increase warehouse storage area by up to 80 percent by implementing a very narrow aisle width configuration. In addition, a very narrow aisle layout allows for more rack faces as well as better access to products. Since greater quantities of products are situated in a more accessible area, there is less travel time needed for gathering and storing items.

Warehouse layouts usually utilize a narrow aisle or very narrow aisle plan. Narrow aisles are usually those that use less than 11 feet of aisle width. Very narrow aisles reduce the aisle width further to around six-and-a-half feet. Storage options are greatly increased with these aisle width options. Standard forklifts can have issues with turning in these aisle widths. These challenges are met by using very narrow forklifts to gain access and complete tasks. When selecting a forklift for a job application, it is essential to know the aisle dimensions. It is important to have the correct aisle dimensions before forklift shopping to avoid securing a machine that won't fit its' intended location. It is essential to take any columns, posts or utilities into account before deciding a type of narrow aisle forklift design as these can block access. Very Narrow Aisle Forklift Trucks Very narrow aisle forklift trucks are almost always powered electrically, usually by rechargeable battery. These very narrow aisle trucks are more commonly available as stand-up riders, which helps increase productivity and operator comfort. The most commonly used types of very narrow aisle forklift trucks are: 1. Reach trucks 2. Order pickers; 3. End-control riders; and 4. Turret or swing-mast. Reach Forklift Trucks Developed as a kind of rider stacker forklift, the reach forklift trucks can be configured for narrow aisle locations. This machine earned its name by its ability to reach its forks to secure a load. The two kinds of reach trucks the moving carriage and the moving mast. The moving carriage functions by lowering and raising the carriage and the operator. The moving mast raises and lowers the forks as the operator remains at ground level. The moving reach truck is typically considered the safest out of the two kinds of reach trucks. Reach trucks use a pantograph system, a type of jointed framework, which allows the operator to reach for or place a load without the need to move the forklift itself. Order Pickers Order pickers have been created to pick items from difficult, high racking systems. They are used for smaller picking items that can be lifted and moved by hand. Order pickers elevate the operator to the level of goods to pick and identify particular items required for filling an order. End-Control Riders End-control riders can pick up loads along the floor level and transport goods horizontally instead of transporting items over heights. Turret or Swing-Mast Forklift Turret or swing-mast very narrow aisle forklift have a pivoting articulating swivel mast. The mast swivels to enable pallets to be positioned on the right or left side of the forklift. Guided Very Narrow Aisle Trucks Very narrow aisle forklift trucks can be guided by rail or wire down the aisles. Since the forklift truck is guided, the chance of colliding with racks while traversing down the aisles is very low. For rail-guided systems, a series of rails are installed into the floor, on both sides of the aisle, and run along the floor for the length of the aisle, curving around the end of the aisle. The forklift is fitted with special

wheel guides that slide into the rails, preventing the forklift from moving outside the rail guards. The wire-guidance system requires that the wires be installed into the floor, along the center of the aisle. Narrow aisle forklifts rely on a wire-guide system to help it communicate with the floor wires. This allows the machine to be steered by the wires, stopping it from traveling outside of the specific location.

### Work Site Considerations

There are a few critical considerations when implementing a very narrow aisle configuration. The floor and the rack construction needs to be evaluated to avoid any issues since the very narrow aisle units have extremely high racking systems. There are four areas which must be meticulously prepared before setting up a racking system and must be continuously monitored and maintained throughout the operation of the warehousing system:

1. The floor must be level;
2. Cracks must be repaired;
3. Load capacity of floor must be appropriate; and
4. The racks must be plumb.

#### Level Floor

Because of the height of the racking systems, any slight slope of the floor is likely to negatively affect the plumbness of the racks, especially over time when loads are continuously placed and removed on the racks. Without this foundation of a level floor, the stability of the racks could be jeopardized.

#### Crack Repair

When cracks in the floor are spotted, they should be assessed and, when necessary, repaired immediately. Cracks may affect the floor's level and, when they are approximately 3/8 inches wide, will need to be properly filled with a material at least as hard as the surrounding floor.

#### Floor Load Capacity

Minimum flooring requirements must be met before considering a narrow aisle installation. At a minimum, the floor should consist of 3,000 psi concrete as well as contain evenly distributed rebar approximately 3 to 4 inches below the surface. Depending on the configuration and load requirements, extra reinforcements may be necessary.

#### Plumb Racks

The racking system is essential to the whole process and needs to be installed properly. There is a major chance of rack failure if improper installation occurs. All racks need to be plumb and this is one of the most vital aspects of correct installation. If necessary, rack shims should be used to ensure the racks are plumb within 1 inch at the 30 foot height of the racks. Racking failure can happen if the aforementioned measures are not taken or implemented correctly. Such failure is likely to result in costly damage to goods, the warehouse facility, forklifts and, worst of all, employees could be significantly injured or even killed. Because of these reasons, these measures are the most important part of implementing a narrow aisle configuration for warehousing optimization.